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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 BEACH DR. EAST
PORT ORCHARD, WASHINGTON 98366
January 20, 1995

MEMORANDUM

SUBJECT: Spokane Junkyard, VOA Results
Samples 94514595 and 94514597

FROM: Gerald H. Dodo, Chemist
USEPA

TO: Kevin Rochlin, Project Officer
USEPA

FULL DATA REVIEW

I have reviewed the attached data package and the corresponding raw data. Based on this review, I find that the Self Evaluation Report prepared by the ESAT contractor was conducted in accordance with the Functional Guidelines, and that the data qualifiers recommended in the ESAT contractor's evaluation are appropriate.

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ENVIRONMENTAL SERVICE ASSISTANCE TEAMS - ZONE 2

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ManTech Environmental

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MEMORANDUM

DATE: January 11, 1995

TO: Jerry Muth, Deputy Project Officer
Joe Blazevich, Task Monitor
Kevin Rochlin, Project Officer

FROM: Marc W. Streightiff, ESAT Data Reviewer

THROUGH: Barry Pepich, ESAT Team Manager

SUBJECT: Quality Assurance Review of the Volatile Analyses of Samples from the Spokane Junkyard Site.

cc: Charles Stringer, USEPA

TID#: 10-9410-509
DOC#: ESAT-10A-7739
WUD#: 1501

The quality assurance review of two water samples collected from the Spokane Junkyard site has been completed. These samples were analyzed for volatile target compounds using a modified USEPA CLP RAS method by the USEPA Region 10 Laboratory in Manchester, WA. This data validation was conducted for the following samples listed by EPA sample codes:

94514595 94514597

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the "National Functional Guidelines for Organic Data Review - 2/94" and the USEPA Region 10 Manchester Environmental Guidelines. The recommendations presented herein are based on the information provided for the review.

1. Timeliness - Acceptable

All of the samples were analyzed within the Functional Guidelines recommended holding time for preserved water samples (14 days from the date of sample collection). None of the data was recommended for qualification based on holding times.

2. GC/MS Tuning - Acceptable

Tuning checks were performed at the beginning of each analysis day. The data presented on each GC/MS Tuning and Mass Calibration form was compared with each mass listing, and raw data.

Calculations and transcriptions were correct. Tuning and performance criteria were met.

3. Initial Calibration

The initial calibration was performed on 9/26/94. The calculations were verified to be correct with the raw data. All average relative response factors (RRFs) were ≥0.05. The percent relative standard deviations (%RSDs) criterion of ≤30% were met by all target compounds and surrogates except for the following:

Compound	%RSD	Qualifier Recommended: Det
1,2,4-trichlorobenzene	30.5	**J**
1,2,3-trichlorobenzene	35.5	**J**

The calibration limit was increased for the following target compounds due to not having RRFs for lower calibration standards in the calculation of the initial calibration mean RRFs:

Compound	Calibration Limit (ng)
dichlorodifluoromethane	10
trichlorofluoromethane	25
acetone	10
methylene chloride	10
1,2-dibromo-3-chloropropane	10
1,2,4-trichlorobenzene	25
hexachlorobutadiene	10
naphthalene	50
1,2,3-trichlorobenzene	50

The quantitation limits for these compounds were adjusted on the Form Is to the levels stated above.

4. Continuing Calibration

There was one continuing calibration standard associated with these samples. The criteria for frequency of analysis and relative retention time (RRT) windows for all target compounds and surrogates were met. The minimum RRF criterion of ≥0.05 was met for all target compounds.

The RRF percent differences (%Ds) criterion of ≤25% as compared to the mean RRFs from the initial calibrations was met for all target compounds except for the following:

Analysis Date	Compound	%D	Sensitivity	Qualifier Recommended Det.	Qualifier Recommended Non-Det.
12/29/94	dichlorodifluoromethane	35.8	decreased	**J**	**UJ**
	chloroethane	35.7	decreased	**J**	**UJ**
	trichlorofluoromethane	26.4	decreased	**J**	**UJ**
	acetone	126	increased	**J**	
	2-butanone	54.6	increased	**J**	
	naphthalene	33.2	decreased	**J**	**UJ**
	1,2,3-trichlorobenzene	29.5	decreased	**J**	**UJ**

Sample results were recommended for qualification accordingly.

5. Blanks

The frequency of analysis of method blanks was met. One method blank was associated with the samples, and contained the following compounds:

Analysis Date	Compound
12/19/94	acetone
	methylene chloride
	2-butanone
	naphthalene

Analytes detected in the samples were qualified as non-detected, "**U**", if the sample result area integration was below five times that of the associated blank for target compounds or below ten times that of the associated blank for common laboratory contaminants. The sample concentration or the laboratory quantitation limit, whichever was greater, was recommended as the qualified result. Detected sample results above the five times or ten times criteria were not recommended to be qualified based on the blank results.

The following detected target compound results were recommended to be qualified as non-detected, "**U**", based on the associated method blank results:

Sample	Compound
94514595	methylene chloride
	2-butanone
	naphthalene

Sample	Compound
94514597	acetone
	methylene chloride
	naphthalene

No tentatively identified compounds (TICs) were present in the blank.

6. Surrogate Recovery - Acceptable

All surrogate recoveries met the Functional Guidelines criteria. Recoveries ranged from 94-100%. No qualifiers were recommended on the basis of surrogate recoveries.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

An MS/MSD was prepared on sample 94514595. All target compounds were spiked into the MS/MSD aliquots at a level of 20 ng. It was recommended that the recoveries for three of the target compounds not be evaluated, since they were present in the sample at native concentrations greater than or equal to 20% of the spiking level. These compounds were acetone, 2-butanone, and 4-methyl-2-pentanone.

The MS/MSD criteria as described in the CLP Statement of Work, 3/90, and the Region 10 Manchester Environmental Guidelines (50-150% recovery, ≤50% relative percent difference) were applied. The following compounds did not meet this criteria:

Compound	% Recovery MS/MSD	Recommended Qualifier:
dichlorofluoromethane	49.2 ~~39.2~~/	**UJ**
chloromethane	45.7/	**J**
trichlorofluoromethane	41.0/43.5	**UJ**

8. Internal Standards Performance - Acceptable

The data reported on the Internal Standard Area Summary form was verified with the raw data. Chromatograms, quantitation lists, and transcriptions were examined.

All analyses met the acceptance criterion for the internal standard (IS) retention time shift (±30 seconds from the associated continuing calibration standard) and area count (-50% to +100% of the area of the associated calibration standard).

9. Compound Identification - Acceptable

The chromatograms and quantitation lists were inspected. Sample and laboratory generated standard spectra were examined. Positive sample results reported on the Form Is were within RRT windows. All criteria were met for mass spectral ion and abundance matching or were judged acceptable.

10. Compound Quantitation and Quantitation Limits (QLs)

The raw data was examined to verify the calculation of sample results and the reported QLs. All QLs were adjusted to sample size, extract dilution, moisture, and lowest level standards used in the initial calibration. Detected sample results less than the QLs were recommended by the laboratory to be qualified as estimates, "**J**".

Sample results were calculated against an updated daily continuing calibration standard.

11. Tentatively Identified Compounds

All TIC results were qualified as tentatively identified estimates, "**JN**", in cases where the library matched spectra was considered to be a reasonable fit. All other TIC results were qualified as estimates, "**J**".

12. System Performance - Acceptable

All of the standards, blanks and samples were analyzed in accordance with the method.

13. Overall Assessment

A total of 10.3% of the target analyte results were recommended to be qualified based on the findings of this data quality assurance review. This was due to the method blank results (1.9%), the continuing calibration results (6.6%), the initial calibration (0.6%), and compound quantitation (1.3%). In cases where more than one of the preceding sections proposed data qualifiers, the most restrictive qualifier was recommended towards the data.

DATA QUALIFIERS

U - The analyte was not detected at or above the reported result.

J - The analyte was positively identified. The associated numerical result is an estimate.

EXP - The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.

REJ - The data are unusable for all purposes.

N - There is evidence the analyte is present in this sample.

NJ - There is evidence that the analyte is present. The associated numerical result is an estimate.

UJ - The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

NAF - Not analyzed for.

NAR - No analytical result.

* - The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)

NOTE: Data users are encouraged to contact their Regional representative within ESD to clarify or obtain further information on the appropriate use of analytical data.

Manchester Environmental Laboratory
Final Report

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 12/19/94
Matrix: Liquid-Total
Sample Number: 94514595
Type: Reg sample
Station Description: RBLK

GCMS

Volatiles

Analyte	Result	Units	Qlfr
1,1,1,2-Tetrachloroethane	1.0	ug/L	U
1,1,1-Trichloroethane	1.0	ug/L	U
1,1,2-Trichloroethane	1.0	ug/L	U
1,1-Dichloroethane	1.0	ug/L	U
1,1-Dichloropropene	1.0	ug/L	U
1,2,3-Trichloropropane	1.0	ug/L	U
1,2,4-Trichlorobenzene	5.0	ug/L	U
1,2-Dibromo-3-chloropropane	2.0	ug/L	U
1,2-Dibromoethane	1.0	ug/L	U
1,2-Dichlorobenzene	1.0	ug/L	U
1,2-Dichloroethane	**0.7**	**ug/L**	**J**
1,2-Dichloropropane	1.0	ug/L	U
1,3-Dichlorobenzene	1.0	ug/L	U
1,3-Dichloropropane	1.0	ug/L	U
1,4-Dichlorobenzene	1.0	ug/L	U
2,2-Dichloropropane	1.0	ug/L	U
2-Butanone	3.5	ug/L	U
2-Chlorotoluene	1.0	ug/L	U
2-Hexanone	1.0	ug/L	U
2-Pentanone, 4-methyl	**8.4**	**ug/L**	
2-Propanone	**21.4**	**ug/L**	**J**
4-Chlorotoluene	1.0	ug/L	U
Benzene	**0.064**	**ug/L**	**J**
Benzene, (1-methylethyl)	1.0	ug/L	U
Benzene, (1-methylpropyl)	1.0	ug/L	U
Benzene, 1,2,3-trichloro	10	ug/L	UJ
Benzene, 1,2,4-trimethyl	**0.022**	**ug/L**	**J**
Benzene, 1,2-dimethyl	1.0	ug/L	U
Benzene, 1,3,5-trimethyl	1.0	ug/L	U
Benzene, 1-methyl-4-(1-meth	1.0	ug/L	U
Benzene, chloro	**0.082**	**ug/L**	**J**
Benzene, ethenyl	**0.022**	**ug/L**	**J**
Benzene, ethyl	1.0	ug/L	U
Benzene, propyl	1.0	ug/L	U
Bromobenzene	1.0	ug/L	U
Bromochloromethane	1.0	ug/L	U
Bromodichloromethane	1.0	ug/L	U
Bromoform	1.0	ug/L	U
Bromomethane	1.0	ug/L	U
Butylbenzene	1.0	ug/L	U
Carbon disulfide	1.0	ug/L	U
Carbon Tetrachloride	1.0	ug/L	U
Chloroethane	1.0	ug/L	UJ
Chloroform	1.0	ug/L	U
Chloromethane	**0.35**	**ug/L**	**J**
cis-1,2-Dichloroethene	1.0	ug/L	U

Analyte	Result	Units	Qlfr
Cis-1,3-Dichloropropene	1.1	ug/L	U
Dibromochloromethane	1.0	ug/L	U
Dibromomethane	1.0	ug/L	U
Ethane, 1,1,2,2-tetrachl	1.0	ug/L	U
Ethene, 1,1-dichloro	1.0	ug/L	U
Ethene, tetrachloro	1.0	ug/L	U
Hexachlorobutadiene	2.0	ug/L	U
Methane, dichloro	2.0	ug/L	U
Methane, Dichlorodif	2.0	ug/L	UJ
MP-Xylene	**0.12**	**ug/L**	**J**
Naphthalene	10	ug/L	UJ
tert-Butylbenzene	1.0	ug/L	U
Toluene	**0.12**	**ug/L**	**J**
Total Xylenes	**0.12**	**ug/L**	**J**
trans-1,2-Dichloroethene	1.0	ug/L	U
Trans-1,3-Dichloropropene	0.94	ug/L	U
Trichloroethene	1.0	ug/L	U
Trichlorofluoromethane	5.0	ug/L	UJ
Vinyl Chloride	1.0	ug/L	U
1,2-Dichlorobenzene-d4	97	%Rec	
1,2-Dichloroethane-d4	96	%Rec	
Benzene, fluoro	99	%Rec	
p-Bromofluorobenzene	98	%Rec	
Toluene-d8	98	%Rec	

Volatiles - Tentatives

2-Pentanol, 2-methyl	**0.52**	**ug/L**	**NJ**	**3-Penten-2-one, 4-methyl**	**0.44**	**ug/L**	**NJ**
2-Pentanone	**1.1**	**ug/L**	**NJ**	**Unknown 01**	**13.3**	**ug/L**	**JN**
2-Pentanone, 3-methyl	**7.3**	**ug/L**	**NJ**	**Unknown 02**	**0.20**	**ug/L**	**JN**
2-Propanol	**97.5**	**ug/L**	**NJ**	**Unknown 03**	**0.38**	**ug/L**	**JN**
3-Pentanone, 2-methyl	**1.4**	**ug/L**	**NJ**	**Unknown 04**	**0.68**	**ug/L**	**JN**

94514595 Reg sample

Analyte	Result	Units	Qlfr
Unknown 05	1.7	ug/L	JN
Unknown 06	0.50	ug/L	JN

Analyte	Result	Units	Qlfr

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: 94514595
Type: Matrix Spike
Station Description:

GCMS

Volatiles

Analyte	Result	Units	Qlfr
2-Butanone	NAR		
2-Pentanone, 4-methyl	NAR		
2-Propanone	NAR		
1,1,1,2-Tetrachloroethane	76.33	%Rec	
1,1,1-Trichloroethane	75.77	%Rec	
1,1,2-Trichloroethane	80.09	%Rec	
1,1-Dichloroethane	77.29	%Rec	
1,1-Dichloropropene	79.45	%Rec	
1,2,3-Trichloropropane	81.67	%Rec	
1,2,4-Trichlorobenzene	78.38	%Rec	J
1,2-Dibromo-3-chloropropane	78.64	%Rec	
1,2-Dibromoethane	77.12	%Rec	
1,2-Dichlorobenzene	80.43	%Rec	
1,2-Dichlorobenzene-d4	100.25	%Rec	
1,2-Dichloroethane	65.67	%Rec	
1,2-Dichloroethane-d4	97.63	%Rec	
1,2-Dichloropropane	79.33	%Rec	
1,3-Dichlorobenzene	77.54	%Rec	
1,3-Dichloropropane	81.54	%Rec	
1,4-Dichlorobenzene	80.29	%Rec	
2,2-Dichloropropane	70.80	%Rec	
2-Chlorotoluene	79.24	%Rec	
2-Hexanone	72.50	%Rec	
4-Chlorotoluene	80.85	%Rec	
Benzene	77.51	%Rec	
Benzene, (1-methylethyl)	79.15	%Rec	
Benzene, (1-methylpropyl)	80.03	%Rec	
Benzene, 1,2,3-trichloro	74.86	%Rec	J
Benzene, 1,2,4-trimethyl	78.76	%Rec	
Benzene, 1,2-dimethyl	78.28	%Rec	
Benzene, 1,3,5-trimethyl	79.65	%Rec	
Benzene, 1-methyl-4-(1-meth	79.50	%Rec	
Benzene, chloro	76.75	%Rec	
Benzene, ethenyl	78.36	%Rec	
Benzene, ethyl	80.02	%Rec	
Benzene, fluoro	99.50	%Rec	
Benzene, propyl	78.27	%Rec	
Bromobenzene	79.38	%Rec	
Bromochloromethane	78.90	%Rec	
Bromodichloromethane	74.80	%Rec	
Bromoform	71.73	%Rec	
Bromomethane	72.26	%Rec	
Butylbenzene	82.22	%Rec	
Carbon disulfide	76.41	%Rec	
Carbon Tetrachloride	73.84	%Rec	
Chloroethane	64.36	%Rec	J

Analyte	Result	Units	Qlfr
Chloroform	77.20	%Rec	
Chloromethane	45.69	%Rec	
cis-1,2-Dichloroethene	78.75	%Rec	
Cis-1,3-Dichloropropene	74.51	%Rec	
Dibromochloromethane	74.54	%Rec	
Dibromomethane	79.09	%Rec	
Ethane, 1,1,2,2-tetrachl	79.39	%Rec	
Ethene, 1,1-dichloro	79.65	%Rec	
Ethene, tetrachloro	79.08	%Rec	
Hexachlorobutadiene	77.24	%Rec	
Methane, dichloro	81.68	%Rec	
Methane, Dichlorodif	49.21	%Rec	J
MP-Xylene	78	%Rec	
Naphthalene	69.26	%Rec	J
p-Bromofluorobenzene	99.75	%Rec	
tert-Butylbenzene	78.26	%Rec	
Toluene	76.82	%Rec	
Toluene-d8	98.89	%Rec	
Total Xylenes	78.13	%Rec	
trans-1,2-Dichloroethene	80.91	%Rec	
Trans-1,3-Dichloropropene	73.50	%Rec	
Trichloroethene	78.25	%Rec	
Trichlorofluoromethane	41.04	%Rec	J
Vinyl Chloride	70.37	%Rec	

Analyte	Result	Units	Qlfr

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: 94514595
Type: Matrix Spike Dupl
Station Description:

GCMS

Volatiles

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
2-Butanone	NAR			4-Chlorotoluene	82.25	%Rec	
2-Pentanone, 4-methyl	NAR			Benzene	79.11	%Rec	
2-Propanone	NAR			Benzene, (1-methylethyl)	80.26	%Rec	
1,1,1,2-Tetrachloroethane	76.65	%Rec		Benzene, (1-methylpropyl)	80.97	%Rec	
1,1,1-Trichloroethane	79.09	%Rec		Benzene, 1,2,3-trichloro	76.92	%Rec	J
1,1,2-Trichloroethane	78.79	%Rec		Benzene, 1,2,4-trimethyl	79.56	%Rec	
1,1-Dichloroethane	78.41	%Rec		Benzene, 1,2-dimethyl	79.13	%Rec	
1,1-Dichloropropene	81.16	%Rec		Benzene, 1,3,5-trimethyl	79.95	%Rec	
1,2,3-Trichloropropane	84.36	%Rec		Benzene, 1-methyl-4-(1-meth	81.38	%Rec	
1,2,4-Trichlorobenzene	81.84	%Rec	J	Benzene, chloro	79.14	%Rec	
1,2-Dibromo-3-chloropropane	77.19	%Rec		Benzene, ethenyl	78.76	%Rec	
1,2-Dibromoethane	78.02	%Rec		Benzene, ethyl	81.15	%Rec	
1,2-Dichlorobenzene	80.36	%Rec		Benzene, fluoro	99.33	%Rec	
1,2-Dichlorobenzene-d4	98.59	%Rec		Benzene, propyl	82.82	%Rec	
1,2-Dichloroethane	66.66	%Rec		Bromobenzene	79.24	%Rec	
1,2-Dichloroethane-d4	97.15	%Rec		Bromochloromethane	80.37	%Rec	
1,2-Dichloropropane	79.08	%Rec		Bromodichloromethane	75.68	%Rec	
1,3-Dichlorobenzene	79.59	%Rec		Bromoform	72.18	%Rec	
1,3-Dichloropropane	79.61	%Rec		Bromomethane	79.58	%Rec	
1,4-Dichlorobenzene	82.06	%Rec		Butylbenzene	83.65	%Rec	
2,2-Dichloropropane	72.18	%Rec		Carbon disulfide	76.70	%Rec	
2-Chlorotoluene	79.95	%Rec		Carbon Tetrachloride	78.51	%Rec	
2-Hexanone	71.45	%Rec		Chloroethane	76.10	%Rec	J

Analyte	Result	Units	Qlfr
Chloroform	78.25	%Rec	
Chloromethane	51.00	%Rec	
cis-1,2-Dichloroethene	80.05	%Rec	
Cis-1,3-Dichloropropene	73.33	%Rec	
Dibromochloromethane	75.58	%Rec	
Dibromomethane	78.17	%Rec	
Ethane, 1,1,2,2-tetrachl	80.06	%Rec	
Ethene, 1,1-dichloro	83.43	%Rec	
Ethene, tetrachloro	80.18	%Rec	
Hexachlorobutadiene	81.39	%Rec	
Methane, dichloro	80.40	%Rec	
Methane, Dichlorodif	53.00	%Rec	J
MP-Xylene	78.60	%Rec	
Naphthalene	73.26	%Rec	
p-Bromofluorobenzene	99.43	%Rec	
tert-Butylbenzene	79.44	%Rec	
Toluene	77.60	%Rec	
Toluene-d8	98.83	%Rec	
Total Xylenes	78.8	%Rec	
trans-1,2-Dichloroethene	81.05	%Rec	
Trans-1,3-Dichloropropene	73.70	%Rec	
Trichloroethene	79.52	%Rec	
Trichlorofluoromethane	43.54	%Rec	J
Vinyl Chloride	77.32	%Rec	

Analyte	Result	Units	Qlfr

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected: 12/19/94
Matrix: Liquid-Total
Sample Number: 94514597
Type: Reg sample
Station Description: MW-3

GCMS

Volatiles

Analyte	Result	Units	Qlfr
1,1,1,2-Tetrachloroethane	1.0	ug/L	U
1,1,1-Trichloroethane	1.5	ug/L	U
1,1,2-Trichloroethane	1.0	ug/L	U
1,1-Dichloroethane	1.0	ug/L	U
1,1-Dichloropropene	1.0	ug/L	U
1,2,3-Trichloropropane	1.0	ug/L	U
1,2,4-Trichlorobenzene	5.0	ug/L	U
1,2-Dibromo-3-chloropropane	2.0	ug/L	U
1,2-Dibromoethane	1.0	ug/L	U
1,2-Dichlorobenzene	1.0	ug/L	U
1,2-Dichloroethane	1.2	ug/L	U
1,2-Dichloropropane	1.0	ug/L	U
1,3-Dichlorobenzene	1.0	ug/L	U
1,3-Dichloropropane	1.0	ug/L	U
1,4-Dichlorobenzene	1.0	ug/L	U
2,2-Dichloropropane	1.0	ug/L	U
2-Butanone	1.0	ug/L	U
2-Chlorotoluene	1.0	ug/L	U
2-Hexanone	1.0	ug/L	U
2-Pentanone, 4-methyl	**0.6**	**ug/L**	**J**
2-Propanone	2.8	ug/L	U
4-Chlorotoluene	1.0	ug/L	U
Benzene	1.0	ug/L	U
Benzene, (1-methylethyl)	**0.062**	**ug/L**	**J**
Benzene, (1-methylpropyl)	1.0	ug/L	U
Benzene, 1,2,3-trichloro	10	ug/L	UJ
Benzene, 1,2,4-trimethyl	1.0	ug/L	U
Benzene, 1,2-dimethyl	**0.032**	**ug/L**	**J**
Benzene, 1,3,5-trimethyl	1.0	ug/L	U
Benzene, 1-methyl-4-(1-meth	1.0	ug/L	U
Benzene, chloro	1.0	ug/L	U
Benzene, ethenyl	**0.019**	**ug/L**	**J**
Benzene, ethyl	**0.036**	**ug/L**	**J**
Benzene, propyl	1.0	ug/L	U
Bromobenzene	1.0	ug/L	U
Bromochloromethane	1.0	ug/L	U
Bromodichloromethane	1.0	ug/L	U
Bromoform	1.0	ug/L	U
Bromomethane	1.0	ug/L	U
Butylbenzene	1.0	ug/L	U
Carbon disulfide	1.0	ug/L	U
Carbon Tetrachloride	1.0	ug/L	U
Chloroethane	1.0	ug/L	UJ
Chloroform	**0.021**	**ug/L**	**J**
Chloromethane	1.0	ug/L	U
cis-1,2-Dichloroethene	1.0	ug/L	U

Analyte	Result	Units	Qlfr
Cis-1,3-Dichloropropene	1.1	ug/L	U
Dibromochloromethane	1.0	ug/L	U
Dibromomethane	1.0	ug/L	U
Ethane, 1,1,2,2-tetrachl	1.0	ug/L	U
Ethene, 1,1-dichloro	**0.57**	**ug/L**	**J**
Ethene, tetrachloro	1.0	ug/L	U
Hexachlorobutadiene	2.0	ug/L	U
Methane, dichloro	2.0	ug/L	U
Methane, Dichlorodif	2.0	ug/L	UJ
MP-Xylene	**0.14**	**ug/L**	**J**
Naphthalene	10	ug/L	UJ
tert-Butylbenzene	1.0	ug/L	U
Toluene	**0.14**	**ug/L**	**J**
Total Xylenes	**0.17**	**ug/L**	**J**
trans-1,2-Dichloroethene	1.0	ug/L	U
Trans-1,3-Dichloropropene	0.94	ug/L	U
Trichloroethene	**0.94**	**ug/L**	**J**
Trichlorofluoromethane	5.0	ug/L	UJ
Vinyl Chloride	1.0	ug/L	U
1,2-Dichlorobenzene-d4	97	%Rec	
1,2-Dichloroethane-d4	96	%Rec	
Benzene, fluoro	100	%Rec	
p-Bromofluorobenzene	94	%Rec	
Toluene-d8	99	%Rec	

Volatiles - Tentatives

Unknown 01	**0.28**	**ug/L**	**JN**

Project Code: TEC-637A
Project Name: SPOKANE JUNKYARD
Project Officer: KEVIN ROCHLIN
Account Code: 955T10PTFA10A5U

Collected:
Matrix: Liquid-Total
Sample Number: KBW4363
Type: Blank
Station Description:

GCMS

Volatiles

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
1,1,1,2-Tetrachloroethane	1.0	ug/L	U	Benzene, (1-methylethyl)	1.0	ug/L	U
1,1,1-Trichloroethane	1.0	ug/L	U	Benzene, (1-methylpropyl)	1.0	ug/L	U
1,1,2-Trichloroethane	1.0	ug/L	U	Benzene, 1,2,3-trichloro	10	ug/L	UJ
1,1-Dichloroethane	1.0	ug/L	U	Benzene, 1,2,4-trimethyl	1.0	ug/L	U
1,1-Dichloropropene	1.0	ug/L	U	Benzene, 1,2-dimethyl	1.0	ug/L	U
1,2,3-Trichloropropane	1.0	ug/L	U	Benzene, 1,3,5-trimethyl	1.0	ug/L	U
1,2,4-Trichlorobenzene	5.0	ug/L	U	Benzene, 1-methyl-4-(1-meth	1.0	ug/L	U
1,2-Dibromo-3-chloropropane	2.0	ug/L	U	Benzene, chloro	1.0	ug/L	U
1,2-Dibromoethane	1.0	ug/L	U	Benzene, ethenyl	1.0	ug/L	U
1,2-Dichlorobenzene	1.0	ug/L	U	Benzene, ethyl	1.0	ug/L	U
1,2-Dichloroethane	1.0	ug/L	U	Benzene, propyl	1.0	ug/L	U
1,2-Dichloropropane	1.0	ug/L	U	Bromobenzene	1.0	ug/L	U
1,3-Dichlorobenzene	1.0	ug/L	U	Bromochloromethane	1.0	ug/L	U
1,3-Dichloropropane	1.0	ug/L	U	Bromodichloromethane	1.0	ug/L	U
1,4-Dichlorobenzene	1.0	ug/L	U	Bromoform	1.0	ug/L	U
2,2-Dichloropropane	1.0	ug/L	U	Bromomethane	1.0	ug/L	U
2-Butanone	**0.6**	**ug/L**	**J**	Butylbenzene	1.0	ug/L	U
2-Chlorotoluene	1.0	ug/L	U	Carbon disulfide	1.0	ug/L	U
2-Hexanone	1.0	ug/L	U	Carbon Tetrachloride	1.0	ug/L	U
2-Pentanone, 4-methyl	1.0	ug/L	U	Chloroethane	1.0	ug/L	UJ
2-Propanone	**1.3**	**ug/L**	**J**	Chloroform	1.0	ug/L	U
4-Chlorotoluene	1.0	ug/L	U	Chloromethane	1.0	ug/L	U
Benzene	1.0	ug/L	U	cis-1,2-Dichloroethene	1.0	ug/L	U

Analyte	Result	Units	Qlfr
Cis-1,3-Dichloropropene	1.1	ug/L	U
Dibromochloromethane	1.0	ug/L	U
Dibromomethane	1.0	ug/L	U
Ethane, 1,1,2,2-tetrachl	1.0	ug/L	U
Ethene, 1,1-dichloro	1.0	ug/L	U
Ethene, tetrachloro	1.0	ug/L	U
Hexachlorobutadiene	2.0	ug/L	U
Methane, dichloro	**0.74**	**ug/L**	**J**
Methane, Dichlorodif	2.0	ug/L	UJ
MP-Xylene	2.0	ug/L	U
Naphthalene	**0.25**	**ug/L**	**J**
tert-Butylbenzene	1.0	ug/L	U
Toluene	1.0	ug/L	U
Total Xylenes	2.0	ug/L	U
trans-1,2-Dichloroethene	1.0	ug/L	U
Trans-1,3-Dichloropropene	0.94	ug/L	U
Trichloroethene	1.0	ug/L	U
Trichlorofluoromethane	5.0	ug/L	UJ
Vinyl Chloride	1.0	ug/L	U
1,2-Dichlorobenzene-d4	97	%Rec	
1,2-Dichloroethane-d4	96	%Rec	
Benzene, fluoro	99	%Rec	
p-Bromofluorobenzene	95	%Rec	
Toluene-d8	100	%Rec	

Analyte	Result	Units	Qlfr